UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,677	12/04/2003	Yan Liu	R74.12-0001	8475

27367 7590 03/06/2006

WESTMAN CHAMPLIN & KELLY, P.A.
SUITE 1400 - INTERNATIONAL CENTRE
900 SECOND AVENUE SOUTH
MINNEAPOLIS, MN 55402-3319

EXAMINER	
APANIUS, MICHAEL	

ART UNIT	PAPER NUMBER
3736	

DATE MAILED: 03/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/727,677	LIU ET AL.	
	Examiner	Art Unit	
	Michael Apanius	3736	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-16 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-16 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 03 December 2003 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 04122004.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to because the abstract representations of elements in the drawings must be given appropriate labels. For example, "16" in figure 3A should be labeled --display--. Furthermore, a box should not surround the label for figure 15. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. A substitute specification and abstract in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification and abstract filed must be accompanied by a statement that it contains no new matter. Examples from the specification of improper idiomatic English include: the use of "endermic" because it is inconsistent with the dictionary definition of the term; "rates of body tissue structure" (Background of the Invention, line 8); "methods and fruits for measuring body fat content" (Background of the Invention, line 16); "different region of body" (page 1, last line); among many others.

3. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

4. The claims are objected to because they include reference characters which are not enclosed within parentheses. For example, "Cm" and "Ca" in claim 2 should be enclosed within parentheses. Furthermore, the reference characters should not be used alone when referring to an element in the claims. For example, at claim 2, line 4, "Cm and Ca" should be replaced or used with the element names, i.e. --capacitance grid sensor and capacitor--. Reference characters corresponding to elements recited in the detailed description of the drawings and used in conjunction with the recitation of the same element or group of elements in the claims should be enclosed within

parentheses so as to avoid confusion with other numbers or characters which may appear in the claims. See MPEP § 608.01(m).

5. Claims 1-16 are objected to because of the following informalities:

a. At claim 1, line 8, --a-- should be inserted before "capacitance grid sensor".

b. At claim 2, line 2, "human's" should be --testee's--.

c. At claim 4, lines 2 and 3, "Ra1" and "Ra2" appear to be switched.

d. At claim 6, line 3, --a-- should be inserted before "measuring unit" and many other elements in the claims so that they are in proper English.

e. At claim 6, line 11 and claim 7, line 4, "sensor" should be --sensors--.

f. At claim 6, lines 11 and 14, the comma should be replaced with --and--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

g. The claims appear to be a translation into English from a foreign document and are replete with grammatical and idiomatic errors. Some of the errors are listed above under claim objections.

h. At claim 1, line 1, "[a] kind of method" is indefinite because the metes and bounds of the claim of what is encompassed by a *kind* of method cannot be determined.

i. The claims contain many limitations that lack proper antecedent basis. For example, at claim 1, line 2, "the method of frequency digital sampling" and at claim 1, line 7, "the positive feedback RC oscillator circuit" lack antecedent basis. Note that a method of frequency digital sampling and a positive feedback RC oscillator circuit are not previously recited in claim 1. Another example is at line 1 of each of claims 7-17, where "Apparatus" lacks antecedent basis. Note that claim 6 recites a body composition monitor and not an apparatus.

j. The use of a limitation in parentheses in the claims is indefinite because it is unclear if the limitation is actually part of the claims. For example, at claim 1, line 14, "two (groups of) electrode plates" is indefinite.

k. The use of the word "endermic" is indefinite in the claims because it is inconsistent with the dictionary definition of the word.

l. At claim 5, line 3, it is not clear as to what is meant by "C1, C2, ... Cn".

m. At claims 8-10, lines 2-3, it is not clear what circuit is meant by "the circuit". Specifically, it is not clear if this refers to another circuit, the positive feedback RC oscillator circuit, or a sub-circuit of the positive feedback RC oscillator circuit.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 6, 7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida (EP 1,147,740) in view of Amerena (US 4,860,753). In regards to claim 6, Yoshida discloses a body composition monitor for measuring body impedance based on a method of frequency digital sampling, comprising a measuring unit, which comprises a weighing sensor (15) and a weighing signal processing circuit (16), and a display unit (2); wherein the said monitor also includes an oscillator circuit (17) for measuring body impedance, the two groups of foot-on electrode plates (4a and 4b) on the platform, a microprocessor (21), a display (10) and a keyboard (11); wherein: the said foot-on electrode plates are connected with the oscillator circuit; the said oscillator circuit and weighing signal processing circuit are in electrical connection with the microprocessor; and the said display and keyboard are in electrical connection with the microprocessor. In regards to claim 7, the monitor is separated into a measuring apparatus (1) and a display apparatus (2). Yoshida does not expressly disclose a positive feedback RC oscillator circuit for measuring a dielectric constant of body tissue and capacitance grid sensors. Amerena teaches a positive feedback RC oscillator circuit (70; column 2, lines 4-7) and capacitance grid sensors (figure 2) for the purpose of overcoming the disadvantages of impedance type measuring devices (column 1, lines 30-35). Note that

because the RC circuit is responsive to the capacitance of the electrode, or body tissue, it is a positive feedback circuit. In regards to claim 11, the capacitance grid sensors taught by Amerena are composed of two non-intersectant electrodes. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to have used the positive feedback RC oscillator circuit and capacitance grid sensors as taught by Amerena in the monitor of Yoshida in order to overcome the disadvantages of impedance type measuring devices such as variation in contact pressure and skin residues.

10. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida (EP 1,147,740) as modified by Amerena (US 4,860,753) as applied to claims 6, 7 and 11 above, and further in view of Ueno et al. (US 6,532,824). Yoshida does not expressly disclose the configurations of the capacitance grid sensors set forth in claims 12-14. Ueno teaches two groups of dentiform, nested and non-intersectant electrodes (figure 6). Ueno further teaches two groups of electrodes which are equidistant and circle outward from the circular center which never intersect (figure 9). Note that the configuration shown in figure 6 can be considered two groups of electrodes that are connected by conductors (the horizontal conductors) and are equidistant and non-touching. It would have been obvious to one having ordinary skill in the art at the time of invention to have alternatively used one of dentiform, nested and non-intersectant electrodes; electrodes which are equidistant and circle outward from a circular center; or two groups of electrodes that are connected by conductors as taught by Ueno as an art-

recognized alternative to the non-intersectant electrodes of Yoshida as modified by Amerena because these alternative electrode configurations would work with equal success.

Allowable Subject Matter

11. Claims 1-5, as best understood, would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action. The following is a statement of reasons for the indication of allowable subject matter: no prior art of record teaches or fairly suggests the method as set forth in claim 1, wherein switched capacitors are introduced to get several oscillating signals with non-fixed different frequencies relating to body impedance.

12. Claims 8-10, as best understood, would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: no prior art of record teaches or fairly suggests a body composition monitor having the specific elements of a positive feedback RC oscillator circuit set forth in claims 8-10.

13. Claims 15 and 16, as best understood, would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: no prior art of record teaches or fairly suggests a body composition monitor having the

specific elements of a infrared signal emitting circuit and the infrared signal transmitting circuit set forth in claims 15 and 16.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 4,291,708 discloses an apparatus and method for detection of tumors in tissue. US 5,579,782 discloses a device to provide data as a guide to health management. US 5,611,351 discloses a method and apparatus for measuring body fat. US 5,720,296 discloses an apparatus and method for analyzing body composition based on bioelectrical impedance analysis. US 6,369,337 discloses a separable fat scale. US 6,473,643 discloses a method and apparatus for measuring body fat. US 6,487,445 discloses a method and apparatus for measuring distribution of body fat. US 2003/0149375 discloses a body fat determining device.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Apanius whose telephone number is (571) 272-5537. The examiner can normally be reached on Mon-Fri 8:30am-5pm.

16. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on (571) 272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

17. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MA

CHARLES MARMOR
PRIMARY EXAMINER